**IT Applications Unit 3, AOS 1, Online Communities**

Complete the following, from Chapter 2, Problem-solving Methodology, pgs, 60-80

**Designing a website solution, p 66**

**Problem-solving Methodology: 4 Stages**

**Analyse**

**Design**

**Development**

**Evaluate**

**Case Study:**

**Indigenous Language Trust, (ILT)**

Using the case study, ILT complete the following:

**Designing a website solution, p 66**

1. List the techniques that web developers can use to ensure their website is efficient?

Use templates and CSS sheets to reduce production time, reduce time waiting for a page to load, and ensure all images are in the same format to load with minimal effort,

1. List the techniques that web developers can use to ensure their website is effective?

Make sure different browsers don’t affect the website design, make it easier to navigate pages by using coloured links etc. keeping the layout consistent, clearly show information using appropriate colours, font sizes, etc.

**Identifying how a solution will function**

Taking into account the technical constraints a range of design tools can be used to show the functionality of the website. Elaborate on each of the following functional design tools:

1. IPO Charts – input-process-output

Show how data is processed into meaningful information. Called a defining diagram, identifies what data is needed for the solution, what information needs to be produced in the solution, how to transform this data and the function of the solution.

1. Flowcharts

These use symbols in a linear sequence to symbolise the steps a user may have to undertake in order to gain information, or how a solution is produced. It should include details of the procedures to produce the solution and output.

1. Layout diagrams

Also known as style sheets, these can show how a webpage will function. What and how pages are linked together, using passwords etc. If images are disabled by the user, ALT tags will appear instead.

1. Website map

A site map or linkage plan is a graphic representation of how pages will link together. Usually hand drawn as a series of boxes attached together, it gives an overall picture how large the website is and how each page is linked. It shows interrelationships between webpages.

* 1. What does information architecture refer to?

Information Architecture refers to the structure of the website and its navigation pathways, and is often shown in a website map. If the webpages are not easily navigated by a user, they will leave the site, and thus webpage navigation must be effective.

**Navigation Design**

1. What considerations need to be taken into planning the navigation design?

A webpage has to be easy to navigate or else the user will quickly leave the site. Using tools such as navigation bars at the top or left hand side, and placing them in the same place on each page, as well as using a string of text reflecting where the user is in the site (Homepage>About Us) all help to make a site easier to navigate. It must be kept the same across all pages.

1. What’s meant by making your website accessible?

A website is accessible if it can be viewed in any internet browser, and can make use of several different tools such as plug-ins so long as they are not the only method of navigation. It must be accessible regardless of a user’s browser or plug-ins. Icons used for navigation should be meaningful and links clear to ensure ease of use if images won’t load.

1. What is a style guide?

A style guide tells you exactly how to format communication for an organisation. They often show how a page should be laid out and how to use a company logo so that it looks like that company has made it even if produced by an outside company.

1. List the conventions of file naming.

The homepage must be called index.html and is the first that appears when a site is opened. Every page’s name must be short and meaningful. The names should be in lower case, and each should be unique. Spaces are replaced with an underscore, and names are limited to 16 characters. The names of images must also be meaningful; usually a word that describes what is in the image.

**Identifying how a solution will appear using design tools, p 70**

**Elaborate on the following:**

1. Mock-up diagram

Mock-up diagrams are a sketch of the actual website that the designer is going to develop. Drawn by hand or created with programs like Illustrator, they use headings and spaces left for text that must be inserted. The text used to fill this space is usually pig Latin with no meaning. Mock-ups are a picture of what a webpage will look like, including images, colours and fonts, etc.

1. Layout diagrams

Layout diagrams provide a visual representation of how the final product should look. They are usually drawn by hand and contain information such as where images and text will be located. It usually takes many attempts before the layout diagram is right.

1. Storyboard designs

A story board is a tool to design the features of each individual page. They show general screen designs and the placement of graphics, as well as describing the links and actions to other pages. The main part of the story board is the drawing of how the page should appear.

**Formats and conventions,** p 73

Elaborate on the following formats and conventions

* Screen size

As not all users’ screens are going to be the same size as the designers, the screen size must be able to fit smaller monitors. No more than 60 characters per line should be used, and at the bottom of the page should be the recommended screen size for best viewing

* Index or home page

The index page needs to contain a contact email address, a date of when the site was last modified, and the author or company’s name and contact details. All home pages must have the file name of index.html

* Scrolling

Most of the text on a page should be placed within a single screen, so that users don’t have to scroll down, however if more text is required no more should be placed than two normal screen sizes, before splitting the page into several pages. Horizontal scrolling should also be avoided.

* Text

Text can be aligned any of the four ways, but it must be kept the same throughout the page. Avoid using all upper case except in some headings, avoid overusing the bold and italic text, and avoid underlining words – they could become mistaken for hyperlinks.

* Navigation

Each webpage should have consistent navigation buttons, as well as buttons that link it to the home page to allow users to reorientate themselves if they become lost in a site.

* Font selection

Maintain the same font size throughout the website, can change size for headings banners etc. usually between 9pt and 12pt is recommended

* Images and file size

Images are a digital representation that incorporates logos, illustrations and other images into a website. File sizes should remain small so that the files load quickly and efficiently

* Style guides

The website must conform to the desires of their client, regarding font, font size, colour etc. and whether these should be emboldened or italicised. Also contains colours for the background or images to use, and formats and conventions.

1. With the ILT case study what formats and conventions have been chosen?

Initially the designer of ILT decided to use a red background with a tiled image, but as the text was too hard to read he reverted to a white background with black text, red or yellow for headings. He designed the page on a 19 inch screen but designed it so it can be viewed on a 1024X786 so that anyone can view it. Each page has consistent navigation on the left side of the screen, as well as consistent text throughout the website. The ILT logo is used on each page. The designer proof read and spell checked all pages for errors.